

IN THE CLAIMS

Please amend the claims as follows:

B⁴ 4. (Amended) The method of claim 1, comprising a pipeline technique where input i , $i=0,1,\dots,N-1$, chooses an output from group of outputs l , $l=0,1,\dots,p-1$, for time slot k in time slot $k-((N-i)*p-l)$ where p is the number of time slots required for one selection.

B⁵ 6. (Amended) The method of claim 2, comprising a pipeline technique where input i , $i=0,1,\dots,N-1$ releases an output from group of outputs l , $l=0,1,\dots,p-1$, for time slot $k+mF$, $m=1,2,\dots$ in time slot $k-((N-i)*p-l)-Np$, and input i chooses an output from group of outputs l for time slot $k+mF$, $m=1,2,\dots$ in time slot $k-((N-i)*p-l)$ where p is the ratio of the durations of the reservation time slot and (data) time slot.

12. (Amended) The method of claim 1 and 2 further comprising the step of negotiating values of time slots per frame associated with input-output pairs, wherein input-output pair (i,j) can be allocated additional Δa_{ij} time slots per frame of length F if it holds that:

$$\sum_m a_{im} + \sum_m a_{mj} - a_{ij} + \Delta a_{ij} \leq F,$$

where a_{kl} , $0 \leq k, l \leq N-1$, is the number of time slots previously assigned to input-output pair (k,l) , and N is the number of inputs and outputs.

B⁶ 13. (Amended) The method of claim 1 and 2 further comprising the step of negotiating values of time slots per frame associated with input-output pairs, wherein input-output pair (i,j) can be allocated additional Δa_{ij} time slots per frame of length F if it holds that:

$$\sum_m a_{im} + \Delta a_{ij} \leq (F+1)/2, \quad \sum_m a_{mj} + \Delta a_{ij} \leq (F+1)/2,$$

where a_{kl} , $0 \leq k, l \leq N-1$, is the number of time slots previously assigned to input-output pair (k,l) .

14. (Amended) The method of claim 1 and 2 further comprising the step of updating the number of credits per frame assigned to input-output pair, when its bandwidth request is

B⁶ accepted, or when it releases previously reserved bandwidth:

$$a_{ij} \leftarrow a_{ij} + \Delta a_{ij}$$

17. (Amended) The method of claim 13 wherein applied to the bandwidth allocation in wide area network, wherein switches in wide area network advertise to other switches reserved bandwidth on all its input and output links:

$$B_i \sum_m a_{im} / F, B_j \sum_m a_{mj} / F, 0 \leq i, j \leq N-1,$$

B⁷ where B_i, B_j , are bit-rates of the corresponding links. When new bandwidth ΔB is requested between two nodes in the network, then all links for which:

$$\Delta B > B_i / 2 - B'_i,$$

are excluded from the network if B_i is the link bit-rate, and B'_i is the link reserved bit-rate

(bandwidth), and bandwidth is reserved according to any routing protocol (such as OSPF) using remaining links from the source to the destination.

Please add the following new Claims:

B⁸ 22. (Newly Added) A method of exchanging the information through a packet switch having a plurality of inputs for switching to specified outputs and a plurality of corresponding input buffers having input-output queues and associated counters, said method comprising the steps of:

attaching users to each input/output port so that their total transmission and reception capacities is less than a half of the port capacity;

prior to sending packets source check the available reception capacity of the destination and transmits packets to it not exceeding this capacity;

setting up a new circuit between switches if the load of the existing circuit exceeds a half of the port capacity;

packets are scheduled in a switch according to the maximal matching algorithm as defined in claim 15;

23. (Newly Added) A method of claim 22 wherein the maximal matching algorithm in